

Important Advances in Clinical Medicine

Epitomes of Progress—Radiology

The Scientific Board of the California Medical Association presents the following inventory of items of progress in radiology. Each item, in the judgment of a panel of knowledgeable physicians, has recently become reasonably firmly established, both as to scientific fact and important clinical significance. The items are presented in simple epitome and an authoritative reference, both to the item itself and to the subject as a whole, is generally given for those who may be unfamiliar with a particular item. The purpose is to assist the busy practitioner, student, research worker or scholar to stay abreast of these items of progress in radiology which have recently achieved a substantial degree of authoritative acceptance, whether in his own field of special interest or another.

The items of progress listed below were selected by the Advisory Panel to the Section on Radiology of the California Medical Association and the summaries were prepared under its direction.

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Cholecystokinetic Cholecystography

THE NORMAL physiologic mechanism resulting in gallbladder contraction is set in motion by food ingestion which initiates neural and hormonal stimuli that stimulate the biliary system. Cholecystokinin is released from the duodenal mucosa in response to the presence of fat and lipolytic products in the small intestine, and to a lesser degree by amino acids and small peptides. It stimulates contraction of the gallbladder and simultaneous relaxation of the sphincter of Oddi, inhibits gastric emptying and increases intestinal motility. Cholecystokinin is a 33 amino-acid polypeptide. However, the C-terminal octapeptide fragment (sincalide) reproduces all the known biologic activities of the entire intact molecule. A study of 40 patients in whom oral cholecystography was required as part of the clinical evaluation showed that the intravenous administration of the C-terminal octapeptide fragment of cholecystokinin, sincalide, affords a safe and effective agent for gallbladder contraction with resultant excellent cystic and common bile duct visualization. Maximum contraction of the gallbladder (40 percent or greater reduction in size) occurs within 5 to 15 minutes after injection of sincalide. Peak gallbladder contraction occurs earlier than that after a fatty meal. The only significant side effects of the procedure are mild nausea and occasional vomit-

ing. Intravenously given sincalide circumvents the problem of unpredictability of response of the gallbladder to a fatty meal and variability in the rate of release of endogenous cholecystokinin.

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REFERENCES

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- Levant JA, Sturdevant RAL: Use of C-terminal octapeptide of cholecystokinin in cholecystography. *Am J Roentgenol Radium Ther Nucl Med* 121:380-383, Jun 1974

Ultrasound In the Evaluation of Abdominal Aortic Aneurysms

ULTRASOUND IS PRESENTLY the diagnostic procedure of choice in the evaluation of pulsatile abdominal masses. It is simple, noninvasive and more accurate than physical examination, plain roentgenography, aortography or isotope aortography in the diagnosis of abdominal aortic aneurysms. Aortography may miss or underestimate the size of a noncalcified aneurysm containing thrombus, while ultrasound will show accurately overall aneurysm size, presence and location of intraluminal clot, and caliber of actual lumen. In addition, ultrasonography is capable of distinguishing paraaortic abdominal masses, such as pseudocysts of the pancreas, which may be indistinguishable clinically from an aneurysm.